



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

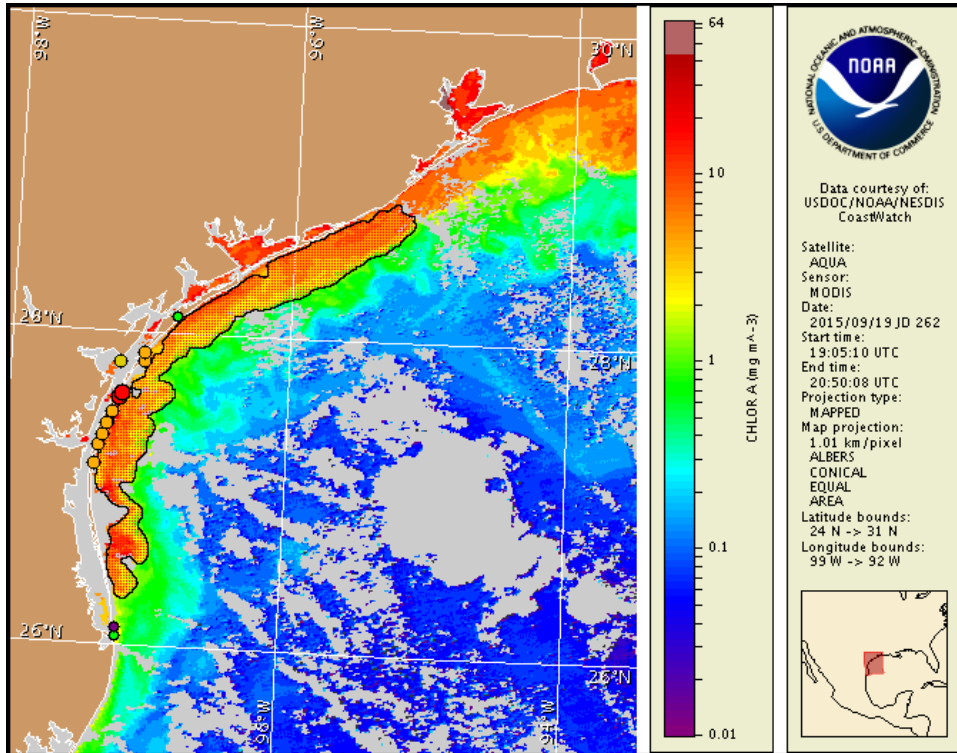
Monday, 21 September 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, September 17, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 11 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/envconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast in the Port Aransas/Mustang Island to South Padre Island regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Monday, September 21 through Thursday, September 24 is listed below:

Region: Forecast (Duration)

Bay region-Aransas Bay to Aransas Pass: Moderate (M-Th)

Bay region-Corpus Christi Bay: Moderate (M-Th)

Aransas Pass to PINS region: High (M-Th)

Padre Island National Seashore region: Moderate (M-Th)

Beach Access 6 to Rio Grande region: Very Low (M-Th)

All Other Texas Regions: None expected (M-Th)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and respiratory irritation have been reported from the Aransas Pass to Padre Island National Seashore regions.

Analysis

Karenia brevis concentrations range from 'not present' to 'high' from Aransas Bay to the South Padre Island region. No additional samples have been received since last week (TPWD; 9/14-16). Samples collected by TPWD last week identified 'not present' to 'medium' *K. brevis* concentrations within Aransas Bay, 'low b' concentrations within Corpus Christi Bay, 'medium' to 'high' *K. brevis* concentrations along the Aransas Bay to PINS region, and 'not present' to 'very low a' concentrations were identified along South Padre Island (TPWD; 9/14-16). Respiratory irritation was reported from Port Aransas south to PINS Mile Marker #15 (TPWD; 9/14-16). Reports of dead fish that may be associated with the bloom have also been received from a number of locations including the southern shores of Packery Channel and the gulf shores of Padre Island (TPWD; 9/15). Recent sampling from Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, shows concentrations of *Karenia brevis* exceeding 10,000 cells/L. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

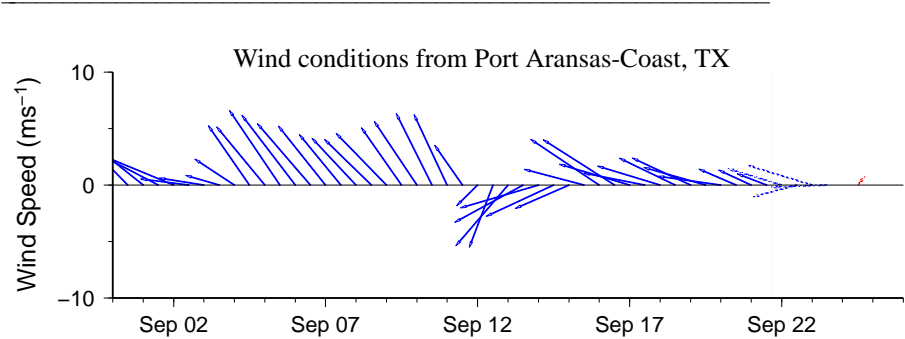
Recent MODIS Aqua imagery (9/19, shown left) shows elevated to high chlorophyll (2-15 $\mu\text{g/L}$) present along- and offshore the Texas coast from Sabine Pass to the Padre Island National Seashore, corresponding with recent sampling confirming the presence of *K. brevis* in the Aransas Pass to Padre Island National Seashore region. Patches of elevated to high chlorophyll (2-13 $\mu\text{g/L}$) are visible, but partially obscured by clouds along- and offshore from Mansfield Pass to the Rio Grande. Elevated chlorophyll visible elsewhere along the coast is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast.

Forecast models based on predicted near-surface currents indicate a maximum bloom

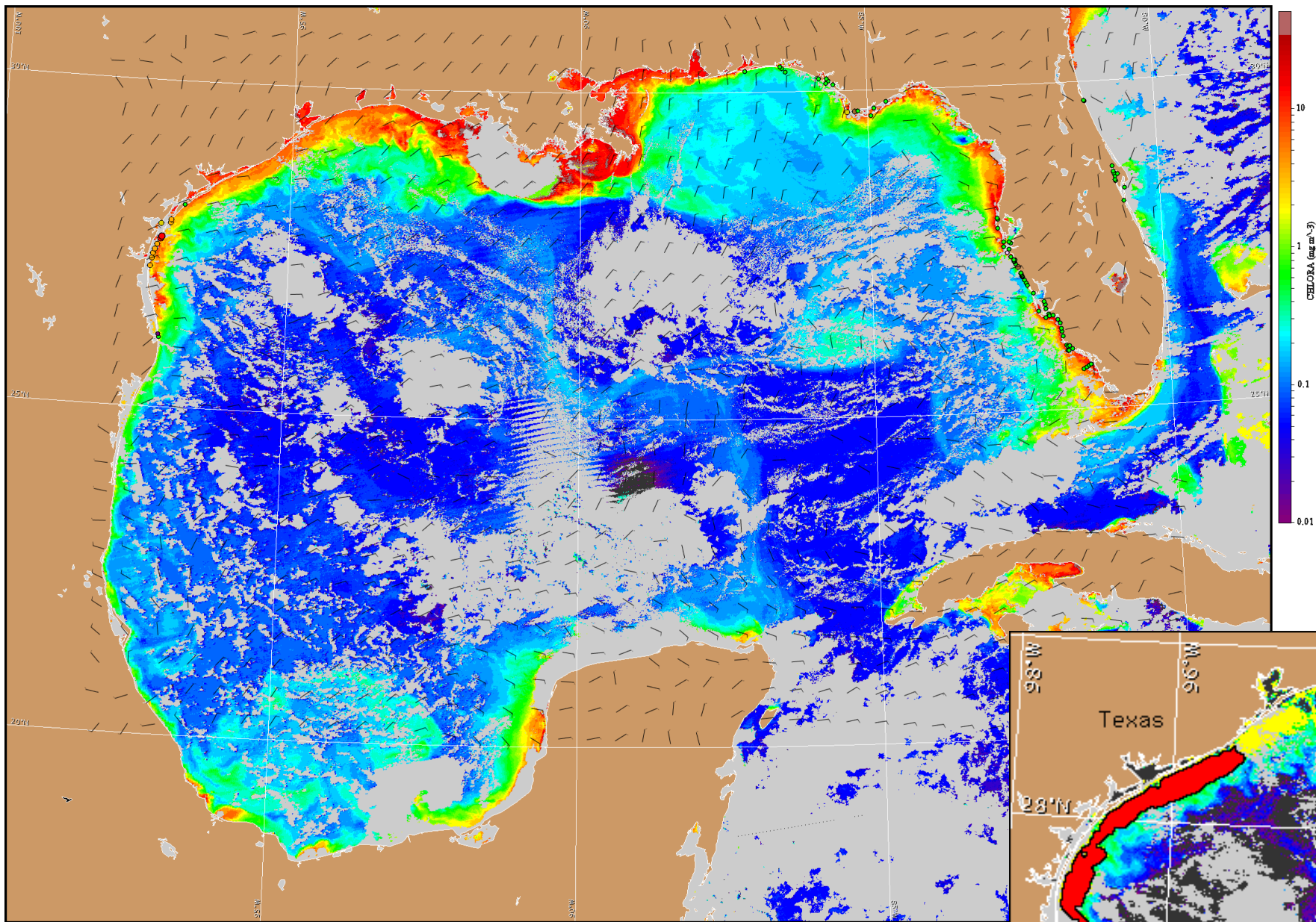
transport from coastal sample locations of 15 km south from the Port Aransas region, 10 km south from PINS Mile Marker #15 and negligible (<10 km) south from the South Padre Island region from September 19-24.

Keeney, Derner

-2-
Wind Analysis
Port Aransas to Baffin Bay: East to northeast winds (5-15kn, 3-8m/s) today through Thursday afternoon.

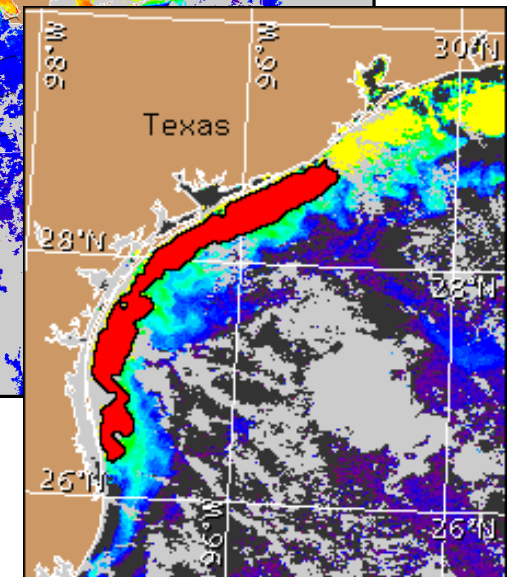


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Satellite chlorophyll image and forecast winds for September 22, 2015 12Z with points representing cell concentration sampling data from September 11 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf



Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).